WHAT IS CLAIMED IS:

1. A warming-up apparatus for a fuel cell, which generates power due to an electrochemical reaction between hydrogen gas, which is fuel, and oxygen gas, which is an oxidant, which comprises:

(a) a high-pressure tank for storing hydrogen;

(b) a hydrogen-occlusion alloy tank having a hydrogen-occlusion alloy accommodated therein;

(c) hydrogen-transferring means which transfers the hydrogen discharged from said high-pressure tank to the hydrogen-occlusion alloy in said hydrogen-occlusion alloy tank; and

(d) heat-transmitting means which transmits the heat generated in the hydrogen-occlusion alloy during the course of storing the hydrogen gas transferred by said hydrogen-transferring means into said hydrogen-occlusion alloy tank to the fuel cell.

2. The warming-up apparatus according to Claim 1, which further comprises a water cooling system which discharges out the heat generated at the time of the power generation in the fuel cell, and wherein said heat-transmitting means transmits the heat generated in the hydrogen-occlusion alloy to cooling water of said water cooling system to heat the fuel cell via the cooling water.

3. The warming-up apparatus according to Claim 2, wherein said heat-transmitting means is actuated when the temperature of said cooling water is not more than a prescribed temperature.

4. The warming-up apparatus according to Claim 1, which further comprises hydrogen-discharging means to discharge the hydrogen having been occluded in said hydrogen-occlusion alloy out of the hydrogen-occlusion alloy tank in order to use the hydrogen for the power generation in the fuel cell.

5. The warming-up apparatus according to Claim 4, wherein said hydrogen-discharging means discharges the hydrogen having been occluded in said hydrogen-occlusion alloy depending upon the warming-up condition of the fuel cell.

6. The warming-up apparatus according to Claim 4, wherein said hydrogen-discharging means discharges the hydrogen having been occluded in said hydrogen-occlusion alloy depending upon the gas pressure of the anode of the fuel cell.

7. The warming-up apparatus according to Claim 4, wherein said hydrogen-discharging means discharges the hydrogen having been occluded in said hydrogen-occlusion alloy depending upon the hydrogen consumption amount consumed by the

fuel cell.

8. The warming-up apparatus according to Claim 1, wherein the power generation in the fuel cell is started by supplying the hydrogen from the high-pressure tank after the actuation of the heat-transmitting means.

9. A process for warming-up a fuel cell, which generates power due to an electrochemical reaction between hydrogen gas, which is fuel, and oxygen gas, which is an oxidant, which comprises the following steps:

(A) a step for storing hydrogen from a high-pressure tank in the hydrogen-occlusion alloy within a hydrogen-occlusion alloy tank; and

(B) a step for transmitting the heat generated at the time of storing the hydrogen in the hydrogen-occlusion alloy.

10. The process according to Claim 9, which further comprises step (C) for supplying the hydrogen to the fuel cell from said high-pressure tank to generate the power after heating the fuel cell.

11. The process according to Claim 9, which further comprises step (D) for monitoring the temperature of the fuel cell, and step (E) for repeating steps (A) and (B) to heat the fuel cell, when the monitored temperature is less than a

prescribed temperature, and step (F) for repeating steps (A) and (B) to heat the fuel cell and for supplying the hydrogen from said high-pressure tank to the fuel cell to start the power generation, when the monitored temperature is not less than a prescribed temperature.

12. A mechanism for warming-up a fuel cell, having a configuration of warming-up the fuel cell by a heat generated during the occlusion of hydrogen in a hydrogen-occlusion alloy.

13. The mechanism for warming-up a fuel cell according to Claim 12, wherein cooling water for cooling the fuel cell is heated by said generated heat to warm-up the fuel cell.

14. The mechanism for warming-up a fuel cell according to Claim 12, which has a configuration that when the temperature of the fuel cell is not higher than a prescribed temperature, said heat is generated to warm-up the fuel cell.

15. The mechanism for warming-up a fuel cell according to Claim 12, which has a configuration that the hydrogen having been occluded in the hydrogen-occlusion alloy is supplied to the fuel cell as fuel.

16. The mechanism for warming-up a fuel cell according to Claim 15, wherein said hydrogen is supplied to the fuel cell

depending upon the anode pressure of the fuel cell.

17. The mechanism for warming-up a fuel cell according to Claim 15, wherein said hydrogen is supplied to the fuel cell depending upon the amount of hydrogen consumed by the fuel cell.

18. The mechanism for warming-up a fuel cell according to Claim 12, wherein the fuel cell starts the power generation after the warming-up.

19. The mechanism for warming-up a fuel cell according to Claim 14, wherein the fuel cell generates power while warming-up the fuel cell when the temperature of the fuel cell is within a given temperature range, whose upper limit is said prescribed temperature, and the warming-up is performed with no power generation when the temperature of the fuel cell is under the lower limit of said given temperature range.